

This listing of claims will replace all prior version, and listings, of claims in the application:

Listing of Claims:

1. (Previously presented) A desalination process to produce potable water which comprises:

- (a) passing a first stream of water containing a high concentration of hardness ions through an ion selective membrane to form a softened water having a reduced content of hardness ions;
- (b) blending the softened water with a second stream of water containing a higher concentration of hardness ions than the softened water to form a feed to a desalination system; and
- (c) introducing the feed to the desalination system to form a water product of potable quality, wherein the proportions of the softened and second stream of water forming the feed to the desalination system are varied to increase the top operating temperature of the system and increase recovery of potable water.

2. (Previously presented) The desalination process according to claim 1, wherein the softened water content of the feed is at least 5%.

3. (Original) The desalination process according to claim 1, wherein the feed is passed through at least one desalination system selected from the group consisting of reverse osmosis, multistage flash distillation, multieffect distillation and vapor compression distillation.

4. (Original) The desalination process according to claim 3, wherein the desalination system is thermal driven and selected from the group consisting of multistage flash distillation and multieffect distillation.

5. (Original) The desalination process according to claim 3, wherein the desalination system is electric driven and selected from the group consisting of reverse osmosis and vapor compression distillation.

6. (Original) The desalination process according to claim 3, wherein the desalination system is multistage flash distillation.

7. (Original) The desalination process according to claim 6, wherein the multistage flash distillation system is operated at a temperature of 95-180°C.

8. (Original) The desalination process according to claim 1 or 6, wherein the ion selective membrane is a nanofiltration membrane.

9. (Previously presented) The desalination process according to claim 8, wherein the first stream of water is subjected to a deaeration pre-treatment step after passing through a softening system comprised of one or more nanofiltration membranes.

10. (Previously presented) The desalination process according to claim 9, wherein the first stream of water is pre-heated by the heat of a reject stream of the desalination system before deaeration.

11. (Original) The desalination process according to any one of claims 1 or 4-7, wherein the ion selective membrane is operated at a variable pressure of 5-80 bar.

12. (Previously presented) The desalination process according to claim 11, wherein the ionic content and quantity of softened water varies with the operating pressure of the ion selective membrane.

13. (Previously presented) The desalination process according to claim 1, wherein the softened water is stored in a buffer system.

14. (Previously presented) The desalination process according to claim 13, wherein the softened water stored in the buffer system is blended with the second stream of water to form the feed to the desalination system.

15. (Previously presented) The desalination process according to claim 13, wherein the softened water stored in the buffer system is injected into the desalination system.

16. (Previously presented) The desalination process according to claim 1, wherein the softened water is fed by a cluster system to two or more desalination systems and blended with the second stream of each system.

17. (Original) The desalination process according to claim 1, wherein the desalination system produces brine containing water selected from the group consisting of reject, blowdown and recycled brine which is partially subjected to a nanofiltration step and recycled through the desalination system.

18. (Original) The desalination process according to claim 1, wherein a stoichiometric amount of acid is added to the first stream before that stream passes through the ion selective membrane.

27. (Previously presented) The desalination process according to claim 1 or 14, wherein the ion selective membrane is operated at a variable pressure as a function of the cost of electricity to form the softened water that is blended in variable proportions with the second stream to increase the operating temperature of the desalination system and increase recovery of potable water.

28. (Previously presented) The desalination process of claim 1, wherein the first stream of water is selected from the group consisting of salt water, seawater, brackish water and impaired water.

29. (Previously presented) The desalination process of claim 28, wherein the impaired water contains soluble salts having an ionic content of hardness ions in excess of 1,500 mg/liter.
